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Revision of the Genus Triplasis.

By GEO. V. NASH.

This group of plants has been frequently considered a part of the genus *Triodia*, founded by Robert Brown on a number of Australian grasses which bear little more than a superficial resemblance to our plants. Hackel * so considered the group, but Bentham & Hooker † adopted the views of Beauvois and gave to it the dignity of generic rank. It has seemed to us for some time that the genus *Triodia* embraced too many forms and that it would be much more satisfactory to divide it into several smaller groups. *Triplasis* approaches most closely to those plants that have been referred to *Triodia* under the specific names of *avenacea*, *pulchella*, *Nealleyi*, etc. The flowering scales are deeply 2-lobed as they are in those plants, but the internodes of the rachilla of the spikelet in *Triplasis* are much elongated and the callus is very long, sometimes two thirds as long as the internodes, and attached to the rachilla by a long oblique angle. The callus being densely pilose on the free side gives the rachilla internodes the appearance of being pilose on one side for a part of their length. This long and manifest callus with its very evident oblique attachment is a character not known to us to occur in any other of the many forms that have been referred from time to time to *Triodia*. The conclusions of Beauvois certainly seem tenable and better serve the end of systematic botany than does

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* Engl. & Prantl, Nat. Pflanzenfam. 2^2: 68. 1887.

† Gen. Plant. 3^2: 1176. 1883.

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the alternative, the merging of the group with a genus that has, under present conceptions, already passed far beyond the bounds of reason or expediency by having incorporated in it a number of well-marked groups that might much better be treated as genera.

The genus *Triplasis* is not a large one, nor is it extensively distributed, its three species being confined to North America east of the Rocky Mountains, and mainly to the vicinity of the coast, but one species, *T. purpurea*, occurs in the interior. The other two are found only in the coastal region south of Virginia, one of them, *T. intermedia*, being known at present only from Florida.

TRIPLASIS Beauv. Agrost. 81, *pl. 16. f. 10.* 1812.
[DIPLOCEA Raf. Am. Journ. Sci. **1**: 252. 1818.]
[MERISACHNE Steud. Syn. Pl. Gram. 117. 1855.]

Tufted grasses with simple or sparingly branched culms, narrow flat leaves which are usually involute when dry, and terminal and lateral few-branched panicles, the latter concealed in the sheaths. Spikelets few, on short pedicels, 2–4-flowered, the flowers perfect or the upper one staminate; rachilla glabrous, the internodes above the first flowering scale much elongated. Scales 4–6, usually purple or purplish: outer 2 empty, keeled, 1-nerved, acute or acuminate: flowering scales deeply 2-lobed at the apex, the lobes truncate to acuminate and pointed, 3-nerved, the nerves densely pilose with ascending hairs, the awn arising between the lobes, shorter than or exceeding them, pilose for part of its length; callus manifest, densely pilose, wedge-shaped or subulate, obliquely attached to the rachilla, its hairs making the internodes appear as if pilose on one side for part of their length: palet shorter than the scale, compressed, 2-nerved, the nerves pilose, the hairs on the lower part short, those on the upper part abruptly much longer and forming a conspicuous tuft. Stamens 3. Styles short, distinct: stigmas plumose. Grain cylindric, free, loosely enclosed in the scale and palet.

Species 3, confined to North America, principally in the eastern and southern portions.

Key to the Species.

Flowering scale one third or more as broad as long, with a shorter straight awn 3 mm. or less long.
  Lobes of the flowering scale rounded or truncate at the irregularly and minutely toothed apex; awn less than 2 mm. long. 1. *T. purpurea.*
  Lobes of the flowering scale acute or acutish at the apex; awn 2.5–3 mm. long. 2. *T. intermedia.*

Flowering scale one fifth as broad as long, its lobes acuminate, pointed, the awn longer than the scale, 6 mm. or more in length, recurved, at least when dry.
3. *T. Americana.*

1. TRIPLASIS PURPUREA (Walt.) Chapm. Fl. South. U. S. 560. 1860.

Aira purpurea Walt. Fl. Car. 78. 1788.
Uralepis aristulata Nutt. Gen. **1** : 63. 1818.
Diplocea barbata Raf. Am. Journ. Sci. **1** : 253. 1818.
Tricuspis purpurea A. Gray, Man. 589. 1848.
Merisachne Drummondii Steud. Syn. Pl. Gram. 117. 1855.
Triplasis sparsiflora Chapm. Fl. South. U. S. 663. 1884. [2d Ed.]

Culms 2–8 dm. tall, usually less than 6 dm., simple or finally slightly branched, the lower internodes roughened with a minute pubescence, at least below the nodes, and also occasionally sparingly hirsute; nodes numerous, densely upwardly barbed with silky hairs : leaves numerous ; sheaths shorter than the internodes, rough, the lower ones sometimes papillose-hirsute at the base; ligule a dense ring of hairs less than 1 mm. long ; blades erect or ascending, flat, or involute when dry, less than 15 cm. long, 1–3 mm. wide, rough on both surfaces, the upper surface usually sparingly hirsute, the uppermost leaf reduced to a point : panicle at length exserted, the axis smooth and glabrous, the roughened branches in 1's or 2's, finally widely spreading, 4 cm. or less long, the lower ones usually divided : spikelets on short hispidulous pedicels, usually purple : scales 4 or 5 ; outer empty 2 acuminate, the first about two thirds as long as the second, which is 3–4 mm. long ; flowering scales divided about one quarter way down, the lobes rounded or truncate at the irregularly and minutely toothed apex, the awn equalling or a little exceeding the lobes, pilose on the lower half, less than 2 mm. long, the lowest scale about 4 mm. long, 1.75 mm. wide when spread out : palet shorter than the scale : grain about 2 mm. long.

In sandy soil, usually along the coast, Ontaria to Florida, west to Texas ; also along the Great Lakes and from Missouri and Nebraska southward.

The *T. sparsiflora* of Chapman appears to us to be but a form of this species. Mr. C. D. Beadle, Curator of the Biltmore Herbarium, kindly sent us for examination the type specimen. It proves to be a smut-infested plant and therefore a very unsatisfactory one to determine properly, its scales necessarily being abnormal. The whole plant has a very odd look, the inflorescence appearing to be a long narrow panicle. A more careful examination, however, reveals the cause of this unique inflorescence in the breaking away of the upper sheaths, thus exposing the secondary and usually concealed panicles, which are present in the late stage of the species of this genus. This is clearly indicated by the swollen pubescent nodes which occur throughout its length. So far as can be judged from the imperfect condition of the plant, the type specimen, as indicated previously, appears to be but a form of *T. purpurea*, and, for the present at least, its disposition under this species seems to us best. Good specimens may be secured later, and then a correct valuation can be placed upon it. The specimen was collected on the "Sea beach at Punta Rosa, Florida, October, 1875."

2. TRIPLASIS INTERMEDIA sp. nov.

Culms densely tufted, 4–8 dm. tall, slender, smooth, more or less hirsute below with appressed or ascending hairs, simple or at length somewhat branched at the lower nodes; nodes numerous, densely and conspicuously upwardly barbed with silvery hairs: leaves numerous; sheaths from one half to three quarters as long as the internodes, very rough, papillose-hirsute towards the base with long ascending hairs; ligule a dense ring of hairs 1 mm. or less long; blades erect or ascending, 13 cm. or less long, the uppermost one reduced to a mere point, involute when dry, very rough on both surfaces and on the margins, hirsute above and sometimes also sparingly below, scantily papillose-ciliate with very long hairs: panicle at length exserted, the branches in 1's–3's, usually in pairs, finally widely spreading, pubescent at the base, rough, the longer ones 2–4 cm. long and more or less divided: spikelets on short pubescent pedicels, 8–10 mm. long, usually purplish: scales 5 or 6, the sixth when present empty; outer 2 empty scales acuminate, rough on the keel, about equal in length, or the first considerably shorter than the second, which is 4–4.5 mm. long; flowering scales divided from one quarter to one third their length, the lobes acute to somewhat obtuse, the callus subulate, about one half as long as the rachilla internodes, the hairs on the lateral nerves about .5 mm. long, much longer than those on the midnerve, the awn 2.5–3 mm. long, straight, much exceeding the scale, the lowest scale about 4.5 mm. long, 1.5 mm. wide; palet about three quarters as long as the scale: stamens purple, 1.75–2 mm. long.

Dry sandy soil, south peninsular Florida. Collected by the writer at Ballast Point, near Tampa, in the vicinity of the Pavillion, on August 20, 1895, no. 2426. It grew in great abundance about one hundred feet from the shore, forming large dense tufts.

3. TRIPLASIS AMERICANA Beauv. Agrost. 81, *pl. 16. f. 10.* 1812.
Uralepis purpurea Nutt. Gen. **1**: 62. 1818.
Uralepis cornuti Ell. Bot. S. C. & Ga. **1**: 580. 1821.

Culms 3–8 dm. tall, slender, smooth, puberulent, the lower internodes also hirsute with nearly appressed hairs, simple; nodes numerous, sparingly, if at all, barbed: leaves numerous; sheaths much shorter than the internodes, smooth, the lower ones hirsute, often sparingly so, with nearly appressed hairs; ligule a scarious ciliolate ring less than .5 mm. broad; blades flat, usually involute when dry, erect or ascending, 15 cm. or less long, less than 2 mm. wide, the uppermost leaf reduced to a point, rough on the margins, smooth on both surfaces, glabrous beneath or with a few long scattered hairs, the upper surface minutely pubescent, sometimes also with scattered long hairs: panicle at length exserted, the axis smooth and glabrous, the branches ascending, single or in pairs, glabrous, somewhat scabrous, simple or sparingly divided, 3 cm. or less long: spikelets on short hispidulous pedicels, usually purple, the callus subulate, about two thirds as long as the rachilla internodes: scales 4 or 5; outer empty 2 acuminate, the first three quarters or more as long as the second which is 3–4 mm. long; flowering scales divided to the middle, the lobes subulate, acuminate, pointed, the awn much exceeding the scale, usually reflexed, at least when dry, pilose for about two thirds its length, 6–8 mm. long, the lowest scale about 5 mm. long, about 1 mm. broad: palet a little more than one half as long as the scale: grain about 2 mm. long.

Dry sandy soil along the coast, North Carolina to Florida, west to Texas.